

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

Complementary and Supplementary Angles Homework

- 1**  $\angle A$  and  $\angle B$  are vertical angles. Which statement is not necessarily true?

**A** The angles are formed by intersecting lines.  
**B** The angles are complementary.  
**C** The angles are not adjacent.  
**D** The angles are congruent.

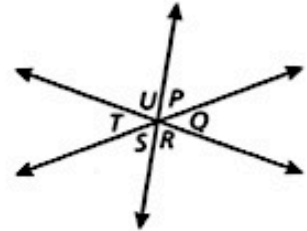
- 2**  $\angle J$  and  $\angle K$  are vertical angles. If the measure of  $\angle J$  is  $120^\circ$ , what is the measure of  $\angle K$ ?

**A**  $30^\circ$   
**B**  $60^\circ$   
**C**  $120^\circ$   
**D** The measure cannot be determined.

- 3**  $\angle F$  and  $\angle G$  are complementary angles. They are also vertical angles. Which could be the measures of the angles?

**A**  $45^\circ$  and  $45^\circ$   
**B**  $30^\circ$  and  $60^\circ$   
**C**  $50^\circ$  and  $50^\circ$   
**D** All of the above are correct.

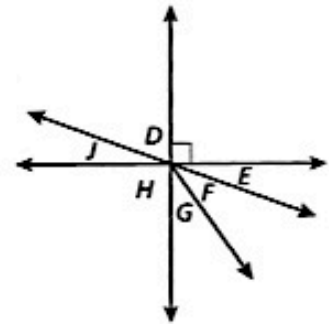
- 4** Which angles are not necessarily congruent?



**A**  $\angle P$  and  $\angle S$   
**B**  $\angle Q$  and  $\angle T$   
**C**  $\angle R$  and  $\angle U$   
**D**  $\angle S$  and  $\angle Q$

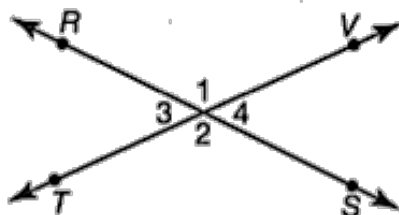


- 5** Which statement is not true?



**A**  $\angle J$  and  $\angle E$  are congruent.  
**B**  $\angle H$  is a right angle.  
**C**  $m\angle G = 20^\circ$   
**D**  $m\angle G + m\angle F = m\angle D$

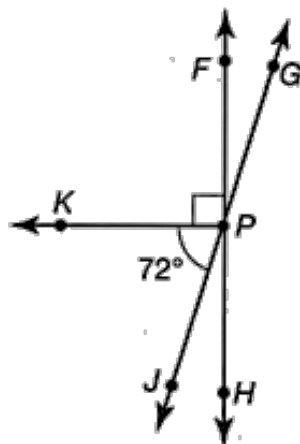
- 4 Lines  $RS$  and  $TV$  intersect to form angles 1, 2, 3, and 4. The measure of  $\angle 2 = 130^\circ$



What are the measures of the other angles?

- F  $m\angle 1 = 130^\circ$ ;  $m\angle 3 = 130^\circ$ ;  
 $m\angle 4 = 130^\circ$   
 G  $m\angle 1 = 50^\circ$ ;  $m\angle 3 = 50^\circ$ ;  $m\angle 4 = 130^\circ$   
 H  $m\angle 1 = 130^\circ$ ;  $m\angle 3 = 50^\circ$ ;  $m\angle 4 = 50^\circ$   
 J  $m\angle 1 = 130^\circ$ ;  $m\angle 3 = 60^\circ$ ;  $m\angle 4 = 60^\circ$

In the figure below, lines  $FH$  and  $GJ$  intersect at point  $P$ . Ray  $PK$  is perpendicular to line  $FH$ . Use this figure to answer Questions 5–9.



- 5 Which is a pair of supplementary angles?

- A  $\angle JPK$  and  $\angle JPH$   
 B  $\angle GPH$  and  $\angle JPH$   
 C  $\angle FPG$  and  $\angle KPH$   
 D  $\angle JPH$  and  $\angle FPG$

- 6 Which is a pair of complementary angles?

- F  $\angle FPG$  and  $\angle JPH$   
 G  $\angle KPJ$  and  $\angle KPF$   
 H  $\angle KPJ$  and  $\angle JPH$   
 J  $\angle KPH$  and  $\angle KPF$

- 7 What is the measure of  $\angle KPG$ ?

- A  $18^\circ$   
 B  $72^\circ$   
 C  $90^\circ$   
 D  $108^\circ$

- 8 What is the measure of  $\angle JPH$ ?

- F  $8^\circ$   
 G  $18^\circ$   
 H  $28^\circ$   
 J  $38^\circ$

- 9 What is the measure of  $\angle FPG$ ?  
 Write the answer.

Answer \_\_\_\_\_